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C-A OPERATIONS PROCEDURES MANUAL

16.4.11 Lockout of NSRL Transport Magnet Power Supplies

(Collider Accelerator Support Group Procedure A.11.0)

Note: This document was formerly a C-A Group Procedure. The content of the group procedure was reviewed by the Technical Supervisor. All approvals and/or issue dates of the original group procedure are maintained for present use.

Hand Processed Changes

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Approved: \_\_\_\_\_  
Signature on File  
Collider-Accelerator Department Chairman  
Date

D. Phillips/F. Kobasiuk

Collider Accelerator Support Group  
Procedure A.11.0  
Original Issue Date: 10/20/06  
Revision 00

## **FES PROCEDURES AND INSTRUCTIONS**

Date: October 20, 2006

By: D. Phillips / F. Kobasiuk

Subject: Lockout of NSRL Transport Magnet Power Supplies

### **1. Purpose:**

- 1.1 The power supplies for the NSRL beam transport located in Bldg 957 have a separate source of input power for the 120 vac control circuit and the 480 vac auxiliary and rectifier circuit. A Kirk Lock/Kirk Lock Tree system is utilized to secure the 480 vac circuit power. Additionally, din rail plugs located inside the power supply are used to permit work on the 120 vac circuits. This procedure provides a description for the use of the lockout system.

### **2. Responsibility:**

- 2.2 Personnel assigned are responsible for carrying out this procedure.

### **3. Prerequisites:**

- 3.1 Only trained and authorized personnel may perform this procedure.

### **4. Precaution:**

- 4.1 A lock box is provided for compartment keys and the 120 vac circuit plugs when LOTO is required.

### **5. Procedure:**

Note: The assumption is made in this procedure that a total lockout of electrical power is required. When a situation requires the control circuits to remain energized (testing, troubleshooting etc.), the steps in procedure to secure the 120 vac control circuit may be omitted.

- 5.1 Turn off the 120 volt control power circuit breaker for the subject power supply.
  - 5.1.1 Circuit Breaker Panel 957RP1-A for the upper equipment bay units.
  - 5.1.2 Circuit Breaker Panel 957RP1-B for the lower equipment bay units.
- 5.2 Turn off and lockout the 480 vac circuit breaker with the Kirk Lock.
  - 5.2.1 Switch Panel PSH-22A and PSH-23 for the upper equipment bay units.
  - 5.2.2 Switch Panel PSH-22 and PSH-24 for the lower equipment bay units.

- 5.3     Transfer the 480 vac circuit breaker Kirk Key to it's respective key tree.
  - 5.3.1   Rotating this key will release the keys to gain entry into the compartments of the power supply.
- 5.4     Using prescribed LOTO procedure, verify that both sources of power are off
- 5.5     Remove the two 120 vac control circuit plugs from the din rail.
- 5.6     Affix hold tape across the fuse holders of the din-rail and maintain possession of the circuit plugs.
- 5.7     Complete your work.
  - 5.7.1   Remove the Hold Tape from the fuse holders of the din rails and reinstall the 120vac circuit plugs.
  - 5.7.2   Return the compartment door key to the key tree and retrieve the 480 vac switch key.
  - 5.7.3   Unlock and turn on the 480 vac circuit breaker.
  - 5.7.4   Turn on the 120 vac circuit breaker.

**6.     Documentation:**

- 6.1     None

**7.     References:**

- 7.1     None

**8.     Attachment:**

- 8.1     None